Steven C. Wofsy
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Education

University of Chicago, Chicago, Illinois. B.S. (with honors) in Chemistry, 1966.
Harvard University, Cambridge, MA. M.A. in Chemistry, 1967; Ph.D. in Chemistry, 1971

Research Interests

Terrestrial carbon cycle; effects of forests on climate, and climate on forests.
Inference of large scale carbon budgets from atmospheric and land surface data
CO_2 as a tracer of atmospheric transport in the upper troposphere and stratosphere
New instrumentation for measuring atmospheric carbon cycle species (CO_2, CO, CH_4).

Professional Experience

June 1971 to September 1973. NRC Research Associate, Smithsonian Astrophysical Observatory.
September 1973 to June 1977. Division of Engineering and Applied Physics, Harvard, Lecturer and Research Fellow on Atmospheric Chemistry (Harvard DEAS).
July 1977 to June 1982. Associate Professor of Atmospheric Chemistry, (Harvard DEAS).
July, 1982 to February, 1995. Senior Research Fellow, (Harvard DEAS).
February, 1995. Gordon McKay Professor of Atmospheric and Environmental Sciences, Harvard (DEAS) and Department of Earth and Planetary Sciences (EPS).
January, 1997. Abbott Lawrence Rotch Professor of Atmospheric and Environmental Science, Harvard University DEAS and EPS.

Committees (recent)

NASA Earth System Science and Applications Advisory Committee 1995-2000; chair, 1997-1999; NASA Advisory Council, 1997-1999.

Carbon Cycle Science Plan Working Group, co-chair, 1998-1999; North American Carbon Program writing group, chair, 2001-2003.

Project or Lead Scientist for the following aircraft measurement programs

Stratospheric Photochemistry, Aerosol, and Dynamics Experiment (NASA ER-2, 1992-3)
Stratospheric Tracers of Atmospheric Transport (STRAT; NASA ER-2 platform, 1995-7)
CO_2 Boundary-layer Regional Atmospheric Study (COBRA, UND Citation 2, 1999-2000, NASA/NOAA/NSF/DoE)
CO_2 Boundary-layer Regional Atmospheric Study- North American Carbon Program, Canada-US

Preliminary Study (May - June 2003, NASA/TEP).

CO_2 Boundary-layer Regional Atmospheric Study-Maine (COBRA, U. Wyoming King Air, 2004 NSF/Biocomplexity)

Selected Recent Publications (200 total since 1970)

Andrews, A. E., K. A. Boering, S. C. Wofsy, B. C. Daube, D. B. Jones, S. Alex, M. Loewenstein, J. R. Podolske, and S. E. Strahan, Empirical age spectra for the midlatitude lower stratosphere from *in situ* observations of CO_2, *J. Geophys. Res, 106,* 10257-10274, 2001.

Barford, Carol C., Steven C. Wofsy, Michael L. Goulden, J. Wm. Munger, Elizabeth Hammond Pyle, Shawn P. Urbanski, Lucy Hutyra, Scott R. Saleska, David Fitzjarrald, Kathleen Moore, Factors controlling long and short term sequestration of atmospheric CO_2 in a mid-latitude forest, *Science 294 (5547):* 1688-1691, 2001.

Chou, Wendy W., Steven C. Wofsy, Robert C. Harriss, John C. Lin, C. Gerbig, and Glenn W. Sachse, Net fluxes of CO_2 in Amazônia derived from aircraft observations, *i. Geophys Res. 107 (D22), 4614, 10.1029/2001JD001295, 2002.*

Daube BC; Boering KA; Andrews AE; Wofsy SC**:** A high-precision fast-response airborne CO_2 analyzer for in situ sampling from the surface to the middle stratosphere. *J. Atmos. Oceanic Technol. 19*, Iss 10, pp 1532-1543, 2002.

Goldstein, A. H., S.M. Fan, M.L. Goulden, J.W. Munger, S.C. Wofsy. Biogenic Olefin Emissions from a Midlatitude Forest, *J. Geophys. Res. 101*, . 9149-9157, 1996.

Goulden, M. L., J. W. Munger, S.-M. Fan, B. C. Daube, and S. C. Wofsy, Effects of interannual climate variability on the carbon dioxide exchange of a temperate deciduous forest, *Science 271*, 1576-1578, 1996.

Goulden, M. L., J. W. Munger, S.-M. Fan, B. C. Daube, and S. C. Wofsy, Measurements of carbon storage by long-term eddy covariance, *Global Change Biology 2, 169-182*, 1996.

Gu, Lianhong, Dennis D. Baldocchi, Steven C. Wofsy, J. William Munger, Joseph J. Michalsky, Shawn P. Urbanski, Thomas A. Boden, Response of a deciduous forest to the Mt. Pinatubo eruption: Enhanced photosynthesis, *Science 299*, 2035-2038, 28 MARCH 2003.

Lin, J. C., C. Gerbig, S.C. Wofsy, A.E. Andrews, B.C. Daube, K.J. Davis, A. Grainger, The Stochastic Time-Inverted Lagrangian Transport Model (STILT): Quantitiative analysis of surface sources from atmospheric concentration data using particle ensembles in a turbulent atmosphere, *J. Geophys. Res.* 108, No. D16, 4493, *10.1029/2002JD003161, 2003.*

Lai, Chun-Ta , James R. Ehleringer , Steve Wofsy, Dave Hollinger, and P.P. Tans. Estimating photosynthetic ^{13}C discrimination in terrestrial CO_2 exchange from canopy to regional scales (accepted in *Global Biogeochemical Cycles*).

Litvak, M., S. Miller, S. Wofsy, M. Goulden, Effect of stand age on whole-ecosystem CO_2 exchange in the Canadian boreal forest. *J. Geophys.Res. Doi: 10.1029/2001/JD000854*, 2003.

Munger, J. William, Song-Miao Fan, Peter S. Bakwin, Mike L. Goulden, A. H. Goldstein, A. S. Colman, and Steven C. Wofsy, Regional budgets for Nitrogen Oxides from Continental Sources: Variations of rates for oxidation and deposition with season and distance from source regions, J. *Geophys.Res., 103*: (D7) 8355-8368, 1998

Potosnak, M. J. S. C. Wofsy, A. S. Denning, T. J. Conway, J.W. Munger, and D. H. Barnes, Influence of biotic exchange and combustion sources on atmospheric CO_2 concentrations in New England from observations at a forest flux tower. *J. Geophys. Res, 104*: 9561-9569, 1999.

Turner, David P., Shawn P. Urbanski, Dale Bremer, Steven C. Wofsy, Tilden Meyers, Stith T. Gower, Matthew Gregory A Cross-biome Comparison of Daily Light Use Efficiency for Gross Primary Production, *Global Change Biology (in press, 2003).*

Wofsy, S. C. and R.C. Harriss, 2002: *The North American Carbon Program (NACP)*. Report of the NACP Committee of the U.S. Interagency Carbon Cycle Science Program. Washington, DC: *US Global Change Research Program*, 75pp.

Wofsy, Steven C. , Where Has All the Carbon Gone? *Science 292*: 2261-2263. (in Perspectives), 2001.